

Ingenious Kinks for Your Car

Exhaust Melts Windshield Ice—Water Pumps Tires — Secret Ignition Switch — Other Ideas

IN LOCALITIES

where the water supply is delivered to your home at a pressure of fifty or sixty pounds you can arrange to let the water pressure do the work of pumping up your tires. All you need is an old water tank, the larger the better, and a few pieces of piping. Fig. 1 shows how the tank should be set up. Assuming that the tank is empty, when the water is allowed to flow in at the bottom from the supply pipe, the air in the tank is compressed until it equals the water pressure. If you attach the air hose to your tire valve, the compressed air flows into your tire as the water rises in the tank. The float valve is needed only to prevent water being forced into the tire when the air in the tank is all used up. To put the tank in condition for another series of pumpings shut the supply valve and open the drain cock. This allows the water to flow out of the tank and a fresh supply of air rushes in by way of the air hose. Since some pressure is required to overcome the valve spring, you cannot pump a tire up to a pressure exactly equivalent to the water pressure.

Fighting Snow on Windshields

NO WIPER will keep your windshield clear when snow freezes to everything it touches. Then you must apply heat to melt the snow. Fig. 2 shows a homemade hot air heater applied to the exhaust pipe. A funnel arrangement with the opening toward the fan forces air through the stove, up an old vacuum cleaner hose and out the nozzle, also a vacuum cleaner part. The air keeps the glass above the freezing point, enabling the wiper to work. Some experimenting will get the nozzle the right distance from the glass.

Cures Sagging Garage Doors

GARAGE doors, because they are large and heavy, often give trouble. They sag and stick and the pounding re-

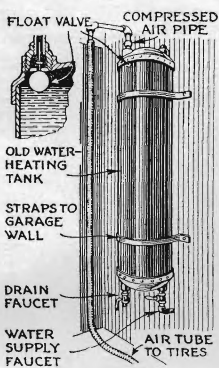


Fig. 1. You can use an old hot-water tank, piped as shown, to give you air pressure for pumping your tires

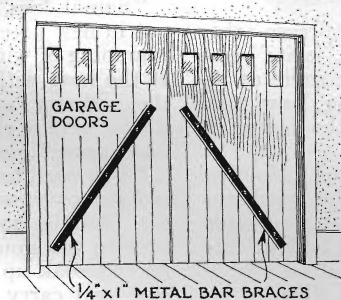


Fig. 3. Metal bar braces bolted to your garage doors, as shown, reinforce the doors and prevent their sagging

metal bars are not easily obtainable, nearly as good results can be got with boards.

Novel Secret Switch

THE value of any secret ignition switch depends on how cleverly it is concealed. The switch shown in Fig. 4 is so constructed that it doesn't look like a switch and can be placed in plain sight if necessary. No one would suspect the wire cleat of harboring a concealed break in the wiring. The cleat can be cut from any

Ten Dollars for an Idea!

HAROLD NOWELL WHITMORE, of Oak Park, Ill., wins the \$10 prize this month for his suggestion of a windshield ice-clearing device (Fig. 2). POPULAR SCIENCE MONTHLY awards \$10 each month, in addition to regular space rates, to the reader sending in the best idea for motorists. Other contributions used are paid for at the usual rates.

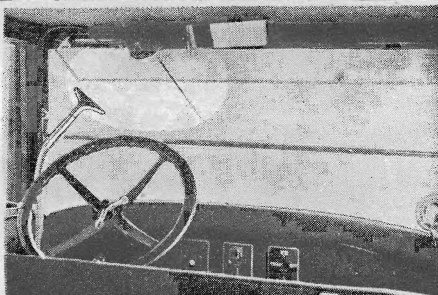
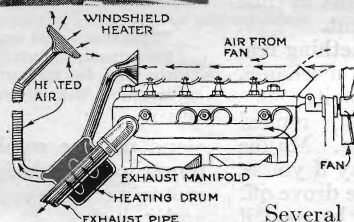


Fig. 2. When sleet or snow begins to stick you need a windshield heater to make driving safe. As shown in this illustration, the windshield is heated by hot air supplied by a special exhaust pipe stove and old vacuum cleaner parts



quired to open them loosens up the hinges and aggravates the trouble. Fig. 3 shows a simple way to brace the door so that there will be less tendency to sag. Metal bars with a cross section measuring $\frac{1}{4}$ by 1 inch are bolted to each door as shown. Aside from stiffening the whole door, these bars transfer the weight to the point best able to bear it, the lower hinge. If the

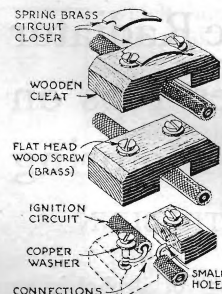


Fig. 4. The particular merit of this secret switch is that it need not be hidden from view. It does not look the part

Use flathead wood screws with copper washers and figure out the size of the enlargement at the bottom of each hole so that when the screw is forced down tight, each wire end will be jammed between the side of the hole and the screw so as to get a good electrical contact. A piece of spring brass cut to snap under the edges of the flathead screws will complete the connection between the wire ends. Of course round-headed screws would ordinarily be used, but anyone noticing the flathead screws is most unlikely to attach particular significance to them. If you install this switch in an old car, dirty the cleat to make it look old.

Several convenient locations for the concealed switch will suggest themselves. Check up the location of the wire running from the timer to the dash switch and then choose the easiest location to get at.

Weatherstripping Your Garage

SECTIONS of old inner tubes tacked along the lower edge of the garage door will help keep the garage warm and prevent fine snow from being blown under the door. Be careful that the tube projects only far enough below the edge to make contact with the ground. If it hangs too far it may get caught and jam the door when it is closed. If the doors fit too loose at top and sides additional sections of inner tube can be nailed to the frame so that the doors will press against them when they are closed.

Doors thus made air-tight will keep the car clean longer after each washing, as they exclude dust.

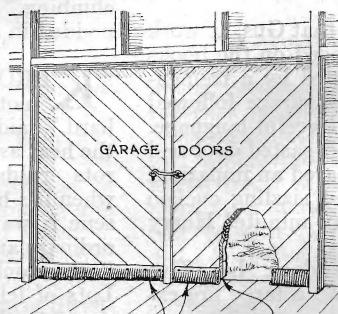


Fig. 5. How sections of old inner tubes weather-strip garage doors